

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
8 December 2005 (08.12.2005)

PCT

(10) International Publication Number  
**WO 2005/115981 A2**

(51) International Patent Classification<sup>7</sup>: C07D 209/00

(21) International Application Number:  
PCT/IN2005/000139

(22) International Filing Date: 3 May 2005 (03.05.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
479/MUM/2004 7 May 2004 (07.05.2004) IN

(71) Applicant (for all designated States except US): USV  
LIMITED [IN/IN]; BSD Marg, Govandi, Mumbai 400  
088, Maharashtra (IN).

(72) Inventors; and

(75) Inventors/Applicants (for US only): TARUR, Venkata-  
subramanian, Radhakrishnan [IN/IN]; A-301, Vaishali  
Towers, B.R. Road, Mulund (West), Mumbai 400 080,  
Maharashtra (IN). SATHE, Dhananjay, Govind [IN/IN];  
H-15, Rajdeep CHS, Gokhale Road, Naupada, Thane 400  
602, Maharashtra (IN). KULKARNI, Swapnil, Jayant  
[IN/IN]; 201, Ram Janaki Co Hsg Soc, Chittaranjan  
Das Road, Ram Nagar, Dombivli (E), Thane 421 201,  
Maharashtra (IN).

(74) Agent: NAIR, Gopakumar, G.; Patent & Trademark  
Agent (Regd.), Gopakumar Nair Associates, Nair Baug,  
Akuli Road, Kandivli (East), Mumbai 400 101 Maharash-  
tra (IN).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE,  
KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,  
MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM,  
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY,  
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,  
ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a  
patent (Rule 4.17(ii)) for all designations
- as to the applicant's entitlement to claim the priority of the  
earlier application (Rule 4.17(iii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

**Published:**

- without international search report and to be republished  
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: A NOVEL PROCESS FOR THE PREPARATION OF 1-(9H-CARBAZOL-4-YLOXY)-3-[2-(METHOXYPHE-  
NOXY)-ETHYL] AMINO]-PROPAN-2-OL

(57) Abstract: The present invention discloses a novel process for preparation of carvedilol by using eco friendly solvents to obtain the said carvedilol in high purity. The said process comprises, reacting 4-hydroxy carbazole of formula (IV) with epichlorhydrin in presence of an organic solvent and a base at temperatures between 10°C - 30°C; further reacting the resultant 4-(2,3-epoxypropoxy)-carbazole of formula (II) with a salt of 2-(methoxyphenoxy) ethylamine of formula (III), preferably hydrochloride salt in presence of a base and a hydroxylic solvent at temperatures between 30°C - 90°C.